

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number  
**WO 2004/033210 A2**

(51) International Patent Classification<sup>7</sup>: **B41J 2/00**

(74) Agent: BOBBIO, Giampiero; c/o Telecom Italia S.p.A.,  
Via G. Jervis, 77, I-10015 Ivrea (TO) (IT).

(21) International Application Number:  
PCT/IT2003/000607

(81) Designated States (*national*): AU, BR, CA, CN, HU, ID,  
IL, IN, JP, KR, MX, RU, SG, US, YU, ZA.

(22) International Filing Date: 8 October 2003 (08.10.2003)

(84) Designated States (*regional*): European patent (AT, BE,  
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(25) Filing Language: English

(26) Publication Language: English

**Declarations under Rule 4.17:**

(30) Priority Data:  
TO2002A000876 10 October 2002 (10.10.2002) IT

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AU, BR, CA, CN, HU, ID, IL, IN, JP, KR, MX, RU, SG, YU, ZA, European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR)
- of inventorship (Rule 4.17(iv)) for US only

(71) Applicant (*for all designated States except US*):  
**OLIVETTI I-JET S.P.A.** [IT/IT]; Località Le Vieux,  
I-11020 Arnad (AO) (IT).

(72) Inventors; and

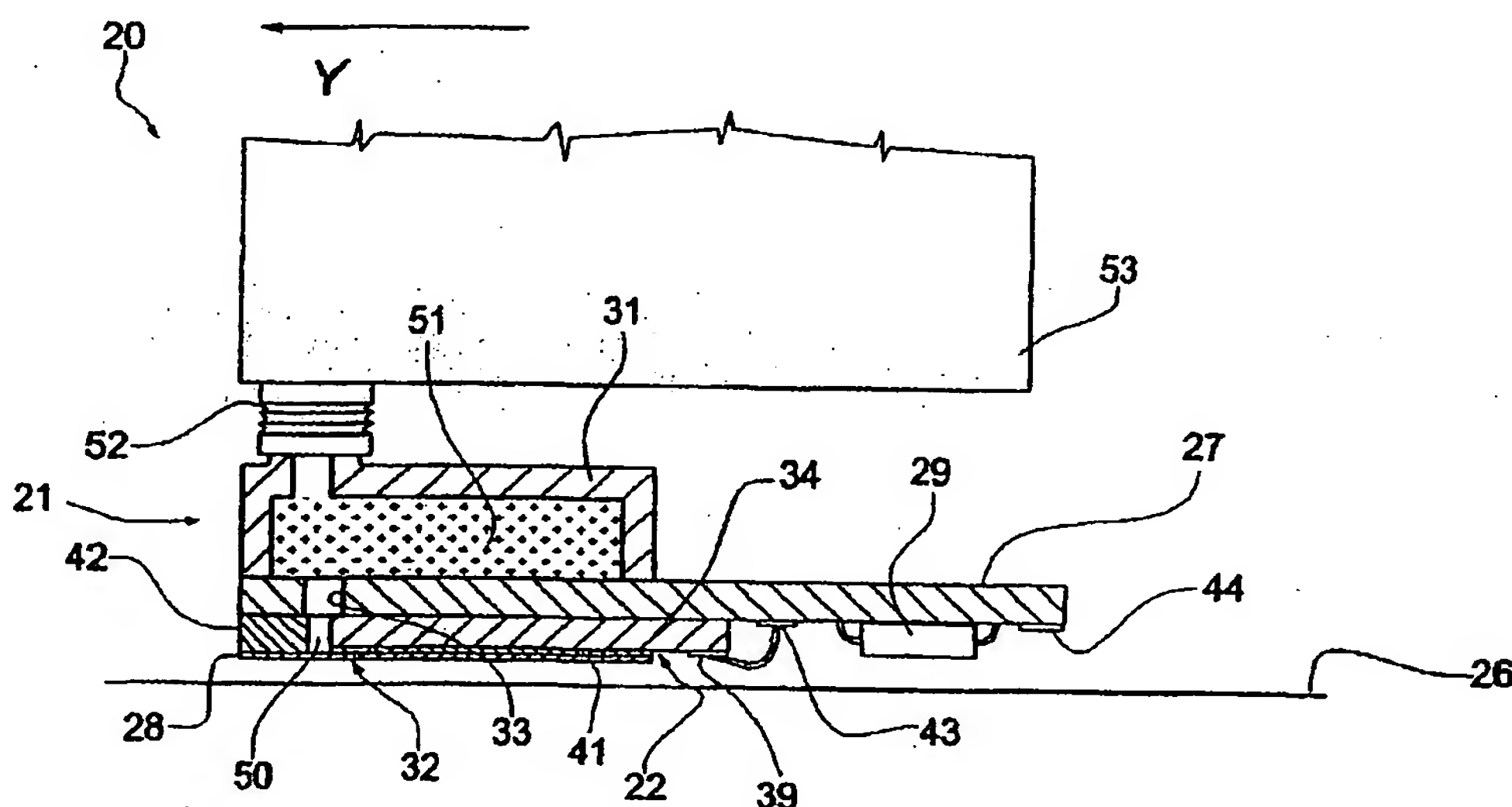
(75) Inventors/Applicants (*for US only*): **CONTA, Renato**  
[IT/IT]; c/o Olivetti I-Jet S.p.A., Località Le Vieux,  
I-11020 Arnad (AO) (IT). **MANINI, Enrico** [IT/IT]; c/o  
Olivetti I-JET S.p.A., Località Le Vieux, I-11020 Arnad  
(AO) (IT).

**Published:**

- without international search report and to be republished upon receipt of that report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PARALLEL INK JET PRINTING DEVICE AND RELATIVE MANUFACTURING



(57) Abstract: The printing device (21) is ink jet, parallel or serial-parallel type and comprises a plurality of ejection modules (22) each of which with ejection chambers suitable for containing ink and with associated relative heating elements (24) for ink ejection control. The device includes a support and a nozzle plate (28) common to the modules (22), and in which the support includes a base plate (27) of rigid material that defines through its thickness a feeding duct (33) for the ink which, in use, is substantially parallel to the line of printing (X axis) and the ejection modules (22) are fixed side by side on the base plate (27) and with the ejection chambers arranged in a line in the same direction (X axis), is a hydraulic, tight connection with the feeding duct (33). The nozzle plate (28) is fixed on the ejection modules (22) constituting an upper, hydraulically tight, closing surface, for the chambers (23) and comprises a plurality of ejection nozzles (32) in a line, in turn in hydraulic connection with corresponding cells of the modules (22).